

# HAWAII JOURNAL WATCH

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**Highlights of recent research from the University of Hawai'i and the Hawai'i State Department of Health**

## HEALTHY BEVERAGE OPTIONS FOR CHILDREN AT HAWAII RESTAURANTS

Hawai'i's "healthy default beverage law" went into effect in January 2020, requiring restaurants to offer a drink such as water, low-fat milk, or 100% juice as a default beverage option with children's meals. Researchers led by Meghan McGurk MPH, with the Thompson School of Social Work & Public Health, examined menus from restaurants across Hawai'i during November and December 2019, before the law went into effect. The researchers looked at 64 restaurants offering children's meals from a random sample of 383 establishments with food permits. Results showed that just 2 restaurants complied with the law before they were required to do so. About 12% offered some default beverages that were healthy, but also offered default beverages that were not healthy. More than 60% of restaurants with children's meals offered a sugar-sweetened beverage, such as soda or flavored milk, as a default beverage. The findings suggest that such laws may improve the beverage options included in children's meals.

- McGurk MD, Cacal SL, Vu U, et al. Baseline assessment of children's meals and healthy beverage options prior to a state-level healthy default beverage (HDB) law. *Journal of Healthy Eating and Active Living*. 2021;1(2):53-63.

## RESILIENCE IN NATIVE HAWAIIAN AND MICRONESIAN FAMILIES WHO HAVE REGAINED STABLE HOUSING

Factors that help Native Hawaiian and Micronesian families who were once houseless but succeeded in regaining stable housing include receiving support and taking initiative. Researchers including Francie J. Julien-Chinn PhD, of the Thompson School of Social Work & Public Health conducted narrative interviews with 4 Native Hawaiian and Micronesian families living on O'ahu who had experienced unstable housing but were living in stable housing at the time of the study. The interviews revealed that the families' protective factors included formal supports such as food stamps and section 8 housing, as well as informal support from family and friends. The families also developed insights into their situations and took initiative to make changes. Spiritual beliefs also played a role, such as the Native Hawaiian concepts of *lōkahi* (harmony) with *Akua* (gods and spirit), *āina* (land), and *kānaka* (family). In interventions aimed at helping houseless families, it will help to focus on the factors that contribute to resilience.

- Julien-Chinn FJ, Park MLN. Understanding the connection between the 'Āina, strengths, and houselessness among previously houseless Native Hawaiian and Micronesian families. *Journal of Human Behavior in the Social Environment*. <https://doi.org/10.1080/10911359.2021.191478>

## PROTEINS LINKED WITH ENDOMETRIAL CANCER RISK

Researchers have identified new proteins that may be linked with women's risk of endometrial cancer. Researchers led by Jingjing Zhu PhD, of the University of Hawai'i Cancer Center, examined data from the genomes of 12906 women with endometrial cancer and 108979 women without this cancer. The study utilized findings from previous genome-wide association studies that had identified 17 specific places in the genome linked to endometrial cancer risk; the new study looked at 1434 proteins in the blood whose circulating levels can be predicted by genetic variants. Results revealed nine proteins that may be linked to endometrial cancer risk, including proteins involved in DNA repair and immunity. The findings could improve the assessment of women's endometrial risk as well as the understanding of endometrial tumor development.

- Zhu J, O'Mara TA, Liu D, et al. Associations between genetically predicted circulating protein concentrations and endometrial cancer risk. *Cancers*. 2021;13(9):2088. doi:10.3390/cancers13092088.

## COMPOUNDS FROM SOUTHEAST ASIAN PLANT LINKED TO PAIN RELIEVING EFFECTS

Compounds called triterpenes from a plant called *Vernonia patula*, which grows in Southeast Asia and used medicinally, may be responsible for the plant's effects on pain and sedation. Researcher Md Afjalus Siraj PhD, of the Daniel K. Inouye College of Pharmacy along with his co-authors conducted simulation studies to examine the binding of six triterpenes isolated from *Vernonia patula* with human cannabinoid type 1 (CB1) receptor. Results revealed that three of the compounds — called friedelin,  $\alpha$ -amyrin, and epifriedelanol — showed a strong binding affinity for the CB1 receptor. The results suggest these compounds may contribute to the pain relieving and sedative effects of the plant.

- Afjalus Siraj M, Rahman MS, Tan GT, Seidel V. molecular docking and molecular dynamics simulation studies of triterpenes from *Vernonia patula* with the Cannabinoid Type 1 Receptor. *Int J Mol Sci*. 2021;22(7):3595. doi:10.3390/ijms22073595

## LONG NON-CODING RNA MOLECULES COULD HOLD CLUES TO LUNG CANCER

Molecules called long non-coding RNAs (lncRNAs) may play valuable roles in diagnosing and treating lung cancer. In a review paper, researchers led by Yu Chen, of the John A. Burns School of Medicine, explain that lncRNAs have a well-established role in regulating gene expression in cells. In addition, some of these molecules may also serve as predictors of the sensitivity of lung cancer cells to chemotherapy, targeted therapy, and radiation treatments. A panel of lncRNAs could serve as a screening marker in the diagnosis of lung cancer; the current method of screening with low-dose CT scans yields many false positives. Other lncRNAs could serve as markers of prognosis of lung cancer patients. Because the molecules remain stable in the blood, they represent an area ripe for further research in the treatment of lung cancer.

- Chen Y, Zitello E, Guo R, Deng Y. The function of lncRNAs and their role in the prediction, diagnosis, and prognosis of lung cancer. *Clin Transl Med*. 2021;11(4):e367. doi:10.1002/ctm2.367